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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,745	09/30/2004	Yuko Kawaguchi	2004_1492A	4363
513 7590 10/27/2009 WENDEROTH, LIND & PONACK, L.L.P. 1030 15th Street, N.W., Suite 400 East Washington, DC 20005-1503				
EXAMINER				
HEYI, HEINOK G				
ART UNIT		PAPER NUMBER		
2627				
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10/27/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/509,745

Applicant(s)

KAWAGUCHI ET AL.

Examiner

HENOK G. HEYI

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21 and 41-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21 and 41-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF-08)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 08/06/2009 have been fully considered but they are not persuasive. Applicant argues that the track pitch of the row of pits in the sub-information area is different from the track pitch of the row of pits in the main information area, as being claimed in claim 21. However, examiner respectfully disagrees with that argument because the specification discloses that it is preferable for the track pitch of a row of pits in the main-information area to be equal to the track pitch of a row of pits or a groove in the BCA (sub-information) area (please see para [0085]). Applicant cites page 35 of the specification in support of the difference between track pitch in main information area and track pitch in the BCA area. However, a careful look at the whole paragraph reveals that the track pitches in those two areas should be equal not different, please see page 35 lines 16-19 of the specification. The claimed pitch range for these two areas is approximately the same and there is no other substantial difference disclosed in the original specification.

Claim Rejections - 35 USC § 112

2. Claims 21 and 41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Amended claim 21 has claim language that states " the track pitch of the row of pits in said sub-information area is different from a

track pitch of the row of pits in said main information area." However, there is no supporting disclosure in the original specification to that argument. Actually, the specification discloses that it is preferable for the track pitch of a row of pits in the main-information are to be equal to the track pitch of a row of pits or a groove in the BCA (sub-information) area (see para [0085]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 21 and 41 rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroaki et al. JP 2001-229542 (Hiroaki hereinafter) in view of Miyagawa et al. US 7,142,496 B2 (Miyagawa hereinafter).

Regarding claim 21, Hiroaki teaches an optical recording medium (Fig. 3) comprising: a main-information area (main information region, para [0009]) in which a metal reflection film is formed on a substrate (reflecting layer 25, para [0038]) where a row of pits is formed as main data (The pit section which formed the position information about main information, para [0039]), and in which information is to be reproduced by irradiating said metal reflection film with a beam of light (information is recorded by irradiating an information layer with the optical beam, para [0010]); a sub-information area in which medium identification information is to be recorded (the medium

identification information which will be recorded, for example on the information layer of a sub information domain, para [0022]) by removing said metal reflection film partially so as to form a plurality of reflection-film removed areas (removal of the reflection film of an optical recording medium is carried out at stripe shape, para [0004]), wherein the medium identification information is to be used to identify the optical recording medium individually (the medium identification information which will be recorded, for example on the information layer of a sub information domain, para [0022]); and a row of pits formed on the substrate in said sub-information area (The pit section which formed the position information about main information, etc. in the sub information domain in the pit is also contained, para [0039]), wherein said sub-information area is concentrically located closer to a center of the optical recording medium than said main information area (as for a sub information domain, it is preferred to exist in a position along inner skin of said main information region of said disc shape medium, para [0018]), but Hiroaki fails to teach a track pitch of said row of pits formed on the substrate in said sub-information area is at least $0.24\mu\text{m}$ wide and at most $0.45\mu\text{m}$ wide wherein a track pitch of a row of pits formed on the substrate in said main-information area is at most $0.43\mu\text{m}$ wide, and wherein the track pitch of said row of pits in said sub-information area is different from the track pitch of said row of pits in said main information area. However, Miyagawa teaches a $0.32\mu\text{m}$ pitch and the shortest recording mark pitch was set to $0.20\mu\text{m}$ (col 10 lines 44-54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the recording medium of Hiroaki so that it would have the pitch

value that was suggested by Miyagawa. The modification would have been obvious because of the benefit of shortened pitch in improving density as taught by Miyagawa.

Regarding claim 41, Hiroaki teaches an information reproducing method for reproducing the optical recording medium according to claim 21, wherein said metal reflection film is irradiated with a beam of light (information is recorded by irradiating an information layer with the optical beam, para [0010]) to reproduce information in: said main- information area where said row of pits is formed and said sub-information area in which the medium identification information is recorded (the medium identification information which will be recorded, for example on the information layer of a sub information domain, para [0022]) but Hiroaki doesn't specifically tell us the beam of light having a wavelength of 405 nm. However, Miyagawa teaches a 400 nm wavelength being used as the laser light for recording and reproducing purposes (col 10 lines 34-36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a laser light with the specified wavelength. The choice of shorter wavelength would have been obvious because of the benefit in attaining higher numerical aperture as it is well known in the blue-ray technology and as suggested by Miyagawa.

Regarding claim 42, Hiroaki teaches a read-only optical recording medium (Fig. 3 and para [0005]) comprising: a main-information area (main information region, para [0009]) in which a metal reflection film is formed on a substrate (reflecting layer 25, para [0038])

where a row of pits is formed as main data (The pit section which formed the position information about main information, para [0039]), and in which information is to be reproduced by irradiating said metal reflection film with a beam of light (information is recorded by irradiating an information layer with the optical beam, para [0010]); a read-only sub-information area in which medium identification information is to be recorded (the medium identification information which will be recorded, for example on the information layer of a sub information domain, para [0022]) by removing said metal reflection film partially so as to form a plurality of reflection-film removed areas (removal of the reflection film of an optical recording medium is carried out at stripe shape, para [0004]), wherein the medium identification information is to be used to identify the optical recording medium individually (the medium identification information which will be recorded, for example on the information layer of a sub information domain, para [0022]); and a row of pits formed on the substrate in said sub-information area (The pit section which formed the position information about main information, etc. in the sub information domain in the pit is also contained, para [0039]), wherein said sub-information area is concentrically located closer to a center of the optical recording medium than said main information area (as for a sub information domain, it is preferred to exist in a position along inner skin of said main information region of said disc shape medium, para [0018]), but Hiroaki fails to teach a track pitch of said row of pits formed on the substrate in said sub-information area is at least $0.24\mu\text{m}$ wide and at most $0.45\mu\text{m}$ wide, and wherein the track pitch of said row of pits in said sub-information area is different from the track pitch of said row of pits in said main information area.

However, Miyagawa teaches a $0.32\mu\text{m}$ pitch and the shortest recording mark pitch was set to $0.20\mu\text{m}$ (col 10 lines 44-54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the recording medium of Hiroaki so that it would have the pitch value that was suggested by Miyagawa. The modification would have been obvious because of the benefit of shortened pitch in improving density as taught by Miyagawa.

Regarding claim 43, Hiroaki teaches an information reproducing method for reproducing the read-only optical recording medium according to claim 42, but Hiroaki doesn't specifically tell us the beam of light having a wavelength of 405 nm. However, Miyagawa teaches a 400 nm wavelength being used as the laser light for recording and reproducing purposes (col 10 lines 34-36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a laser light with the specified wavelength. The choice of shorter wavelength would have been obvious because of the benefit in attaining higher numerical aperture as it is well known in the blue-ray technology and as suggested by Miyagawa.

Regarding claim 44, Hiroaki teaches the read-only optical recording medium according to claim 44, but Hiroaki fails to teach a track pitch of a row of pits formed on the substrate in said main-information area is at most $0.43\mu\text{m}$ wide, and wherein the track pitch of said row of pits in said sub-information area is different from the track pitch of

said row of pits in said main-information area. However, Miyagawa teaches a $0.32\mu\text{m}$ pitch and the shortest recording mark pitch was set to $0.20\mu\text{m}$ (col 10 lines 44-54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the recording medium of Hiroaki so that it would have the pitch value that was suggested by Miyagawa. The modification would have been obvious because of the benefit of shortened pitch in improving density as taught by Miyagawa.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENOK G. HEYI whose telephone number is (571)270-1816. The examiner can normally be reached on Monday to Friday 8:30 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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